



Ayurveda Management Of PCOS Related Anovulatory Infertility: A Case Study

Authors:

1. Dr. Vrushti Patel, P.G. Scholar, Department of PTSR, ITRA, Jamnagar, Gujarat, India
2. Prof. Shilpa B. Donga, H.O.D., Department of PTSR- ITRA, Jamnagar, Gujarat, India

Name, address and telephone number of corresponding author: Dr. Vrushti Patel, PG Girls' hostel,
ITRA, Jamnagar, Gujarat, India

Abstract:

Introduction: Infertility affects millions of people and has an impact on their families and communities. Estimates suggest that approximately one in every six people of reproductive age worldwide experience infertility in their lifetime. PCOS is the commonest cause of anovulation and a leading cause of infertility. Hormonal imbalances, irregular periods, high testosterone, ovarian cysts, and irregular ovulation can all result from PCOS, which can also make it more difficult to conceive. Conventional treatment includes the administration of SERM, Gonadotropins and laparoscopic ovarian surgeries which are having more side effects and not much effective to achieve conception. Hence creating an Ayurvedic treatment protocol is indeed crucial for achieving better outcome.

Case Presentation: The patient in this case had complaint of failure to conceive with irregularly delayed menses for 2 years. After not achieving satisfactory results with other treatment, she came for Ayurvedic management in OPD of PTSR at ITRA, Jamnagar.

Management and Outcome: She was managed with *Virechana*, *Matra Basti* and *Madhutailika Basti* along with *Shamanaushadhi*. Following this protocol, the patient successfully conceived within 4 months of treatment.

Key words: Ayurveda, Infertility, Polycystic Ovarian Syndrome, Anovulation, Virechana, Matra Basti, Madhutailika Basti.

Introduction

Infertility affects millions of people and has an impact on their families and communities. Estimates suggest that approximately one in every six people of reproductive age worldwide experience infertility in their lifetime ^[1]. That can cause psychological, physical, mental, spiritual, and medical detriments to the patient. Ovulatory disorders account for approximately 25% of infertility cases in women ^[2]. World Health Organization subdivided ovulatory disorders into four classes among which one is Norm gonadotropic norm oestrogenic anovulation: i.e., polycystic ovarian syndrome (PCOS) ^[2]. PCOS is heterogenous by nature and can be defined by a combination of sign and symptoms of androgen excess and ovarian dysfunction in the absence of other specific diagnosis. The aetiology of this syndrome remains largely unknown, but mounting evidences suggest that PCOS might be a complex multigenic disorder resulting from the interaction between multiple genetic, environmental and behavioural factors. Infertility caused by PCOS is thought to be associated with dysfunction in developing a mature follicle leading to anovulation. Polycystic ovary syndrome (PCOS) affects an estimated 8–13% of reproductive-aged women. Up to 70% of affected women remain undiagnosed worldwide ^[3].

A direct description of Poly Cystic Ovarian Syndrome in classical Ayurvedic Texts is not available. According to Ayurveda important factors for conception are *Ritu*, *Kshetra*, *Ambu* and *Beeja* and also normalcy of *Hridaya*. Abnormality among any one of these may cause *Vandhyatva* ^[4]. As *Bija* is considered as *Antahapushpa*, i.e. ovum, *Beejadushti* can be understood as anovulation. *Vandhyatva* due to anovulation may be correlated with various conditions mentioned in classics which include *Granthibhuta Artavadushti*, *Artavakshaya* or *Nashtartava*. *Vata dosha* is responsible for proliferation and division of cells and rupture of mature follicle ^[5], *Pitta Dosha* is responsible for maturation of follicles and *Kapha Dosha* stands for nutritive factor. Vitiating of *Tridosha*, Especially *Vata Dosha* leads to improper *Beejanirman* and *Beejotsarga* leads to anovulatory infertility. Considering this, it has been planned to evaluate the significance and impact of *Virechana Karma*, *Matra Basti* with *Dashamoola Taila* and *Madhutailika Basti* along with *Artavajanana* and *Garbhasthapana Aushadhi* in cases of infertility due to anovulation.

Case Overview

A 23 years old woman visited the *Prasuti Tantra Evum Striroga* OPD, ITRA, Jamnagar with concern of failure to conceive for 2 years. Her menstrual history revealed irregular cycles with normal duration and no pain. She was diagnosed with bilateral PCOD based on her USG findings. The patient had no history of hypertension, Hypothyroidism, DM or any other medical condition. No any surgical procedure was done. Her family history was not significant. She had good appetite, Regular bowel movements, urinated 3-4 times a day and sleep duration averaged 8 hours at night. Her menarche was at the age of 12 years. Interval of her menstrual cycles was 45 to 60 days with 3 to 4 days' duration, moderate flow, no clots and no pain. She got married at the age of 21 years and her obstetrical history was nil. Furthermore, there was no history of contraceptive use.

Clinical findings

On physical examination, pallor, icterus, clubbing, cyanosis and lymphadenopathy were absent. Her Pulse was 76/min and her BP was 110/70 mm hg. Her height was 149 cm and weight was 55 kg [BMI – 24.8 kg/meter²]. On systemic examination, no abnormality was seen. On abdominal examination no abnormality was detected and per speculum examination revealed healthy cervix without any abnormal vaginal discharge. Per vaginal examination revealed anteverted anteflexed mobile uterus with no tenderness, firm cervix without cervical motion tenderness and clear bilateral fornices.

Ashtavidha Pariksha (eight-fold examination) revealed *Nadi Vata Pradhana Kaphaja*, *Mootra Pravrutti* was 3-4 times/day. *Mala Pravrutti* 1time a day, which was of normal consistency. *Jihva* was *Saama* (whitish-coated). Patient's *Aakriti* (general body built) was *Madhyama*.

Dashavidha Pariksha (tenfold examination) of the patient was done which illustrates that the patient was *Vata-Kapha Prakriti* (physical built), *Vikriti* – *Vata-Kapha Pradhana*, *Sara* and *Samhanana* were *Madhyama*, *Satva-Avara*. The patient had *Katu* and *Lavana rasa Priyata* with *Madhyama Abhayvarana Shakti*, *Jaran Shakti*, and *Vyayama Shakti* was *Avara*, which reveals that *Roga* and *Rogi Bala* were *Madhyama*.

Investigations

Her blood and urine investigations were normal. Her USG findings showed Bilateral bulky ovaries with changes of polycystic ovarian disease and anovulation in 3 consecutive cycles. Her HSG revealed bilateral patent fallopian tubes. Her Thyroid profile was also normal. Her husband's semen analysis was also normal.

Treatment Protocol

Patient underwent for *Virechana karma* in first month of treatment with *Trivrutta Avaleha*. In cycle following next cycle *Matra Basti* with *Dashmula Taila* (60 ml) was given for 7 days after cessation of menses and in fourth cycle *Madhutailika Basti* was given for 8 days after cessation of menses. Along with this a combination of *Yashtimadhu Churna*, *Shatavari Churna* and *Shatapushpa Churna* was given orally with *Ghrita* before food twice a day on. *Garbhasthapana Yoga* which includes *Bala Churna*, *Brahmi Churna*, *Guduchi Churna* and *Shatavari Churna* was given with Milk before food twice a day after ovulation.

Follow-up and outcome

After the completion of 4 months of protocol, the patient missed her periods, UPT was done and showed positive results. After that, USG was done revealing 6.4 weeks of normal gestational sac at fundal region with 3.4 mm CRL and cardiac activity present.

Discussion

Ovulatory cause is an important subset of infertility among women. Anovulation due to PCOS is a growing problem due to changes in life-style, faulty food habits, environment, stress, etc. Due to *Nidanasevana* imbalance in *Tridosha* mainly in *Vata* and *Kapha Dosha* occurs which leads to *Mandagni* and further causes *Srotorodha* in *Rasavaha* and *Artavavaha srotasa*. As *Artava* (*Antahpushpa*) is *Upadhatu* of *Rasa Dhatu*, proper formation of *Artava* will be hampered and cause *Bijadushti*. Improper functioning of *Vata* and *Kapha dosha* will lead to faulty development of Follicle and anovulation.

Virechana removes the metabolic waste, accumulated toxins and vitiated *Dosha* from the body. It also helps in regularising the disturbed hormonal levels in the body. It also increases the potency of *Bija*^[7]. *Virechana* causes the normalcy of *Agni* and removes *Srotorodha*^[8]. After *Srotoshodhana* there will be proper formation of *Rasa Dhatu* which ultimately leads to the formation of normal functioning *Artava Upadhatu*. After *Virechana* she started getting normal periods. As *Basti* is the best treatment for vitiated *Vata Dosha*, *Matra Basti* with *Dashamula Taila* was planned. Through the systemic action *Basti*, is capable of removing the *Doshas* from the whole of the body. *Dashamula Taila*, by its *Madhura*, *Tikta*, *Kashaya Rasa*, *Ushna Veerya*, and *Vatakaphahara Karma* causes *Vatanulomana* and *Kaphashamana*. It treats cystic ovaries by virtue of its *Shothahara* Property. *Matra Basti* with *Dashamula Taila* is known to be beneficial for managing cystic tendencies, especially when influenced by *Vata Dosha* and by this it helps to achieve ovulation. In *Madhutailika Basti*, by its *Yogavahi* property, honey boosts the potency of *Basti*^[9]. By means of its quick smooth, and molecular attributes, *Saindhava* dissolves *Dosha*, opens up microchannels, and breaks down unhealthy *Mala*. *Tila Taila* reduces *Ruksha* and *Parusha Guna* of *Vata* by its *Guru* and *Snigdha Guna*. *Madhutailika Basti* helps in *Amapachana*, *Vata Kapha Shamana* and *Srotoshodhana* which leads to which ensures proper functioning of *Vayu* which leads to regulation of ovarian function and ultimately ovulation^[10]. *Madhutailika Basti* has quicker absorption and immediate effects because it enters the systemic circulation through the rectum. The gastrointestinal tract's motility, exocrine and endocrine secretions, and microcirculation are all regulated by the and enteric nervous systems. The CNS (Central Nervous System) and ENS (Enteric Nervous System) are quite similar. *Madhutailika Basti* travels to the G.I. tract which is considered the enteric nervous system. *Basti Dravya* Stimulate endogenous opioids which play a role in modulating the release of GnRh from Hypothalamus, which in turn, stimulates the release of FSH and LH from pituitary gland, which are crucial for ovarian function and ovulation. Thus it ultimately regulates H-P-O axis and helps in ovulation. *Yashtimadhu* is having *Madhura Rasa*, *Guru*, *Snigdha Guna* and *Sheeta Veerya* which help in the development and maturation of follicles. Oral intake of *Yashtimadhu*, by its licorice component can cause reduction in testosterone levels, and significantly enhance oocyte maturation,

fertilization, and embryo development. Also, licorice extract can improve ovarian morphology in PCOS^[11]. *Ashwagandha* can enhance folliculogenesis and improve LH, FSH, and testosterone balances^[12]. By *Agnivardhana Guna* and *Ushna Virya* of *Shatapushpa*, correction at *Dhatu* level can be achieved. *Vata Prashamana* property could have acted *Vatahara- Vatanulomana* in the cycle which can probably be appreciated as the neuro-endocrine control at the H-P-O axis. It is an excellent drug for ovulation induction by virtue of its *Ritupravartana* and *Vatashamana Karma*^[13].

Bala Churna, *Ashwagandha Churna*, *Brahmi Churna*, *Guduchi Churna* and *Shatavari Churna* are mentioned in *Prajasthapana Gana* by Acharya Charaka. Thus these drugs have the potential for fertilization and proper implantation of embryo.

Patient consent details

Authors declare that they have obtained a patient consent form, where the patient has given her consent for reporting the case along with the images and other clinical information in the journal. The patient understands that her name and initials will not be published and due efforts will be made to conceal her identity.

References

- 1) <https://www.who.int/news-room/fact-sheets/detail/infertility> [Updated: 2024 May 22] [Accessed 4th July 2024]
- 2) Matthew H. Walker; Kyle J. Tobler. Female Infertility [Updated: 2022 december 19]. In: StatPearls [Internet]. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK556033/>, [Accessed 2nd July 2024]
- 3) Polycystic ovary syndrome [Updated: 28 June 2023] Available from: <https://www.who.int/news-room/fact-sheets/detail/polycystic-ovary-syndrome> [Accessed 2nd July 2024]
- 4) Premavati Tiwari, Ayurvediya Prasuti Tantra and Stree Roga, 2nd ed: Varanasi 2005.pp-550, pg-115.
- 5) Agnivesha, Charaka, Dridhabala . In: *Charaka Samhita, Sutra Sthana, Vatakalakaliya Adhyaya, 12/8*. 4th ed. Jadavaji Trikamji Acharya., editor. Varanasi: Chaukhambha Sanskrit Sansthan; 1994. p. 79.
- 6) Ibidem. *Charaka Samhita, Sutra Sthana, Vatakalakaliya Adhyaya, 12/11*. :80.
- 7)Shree Hemraj Sharma,editor, *Kashyapa Samhita*,Kashi samskrit Maala 154,Chaukhambha Sanskrita Sansthana, Varanasi. Kalpasthana,Revtikalpa, Shloka no 33, p-240.
- 8) Pt. Rajeswaradatta Sastri, Editor, Acharya Agnivesha, Charak Samhita Dhridbala Krita, Shiddhi Sthana, Kalpanasiddhi Adhyaya, 1/17, Chaukhamba Bharati Academy, Varanasi, 2011, page-964.
- 9) Brahmasankara Misra editor, Bhavaprakasa Nighantu of Sri Bhava Misra, First Part Maghuvarga 1-5; 11th edition; Chaukhambha Sanskrit Sansthan; Varanasi. -2007, pg 788.
- 10) Kamini Dhiman, Shachi Pandya, L.P. Dei, AnupThakar, K. S. Dhiman. Role of Madhutailik Basti in infertility w.s.r. to anovulatory factor.[2014 december] Available from: https://www.researchgate.net/publication/259978183_ROLE_OF_MADHUTAILIKA_BASTI_IN_INFERTILITY_WSR_TO_ANOVULATORY_FACTOR [Accessed 4th July 2024]
- 11) Maryam Shamsi, M.Sc., Vahid Nejati, Ph.D., Gholamreza Najafi, Ph.D., and Sana Khajeh Pour. Protective effects of licorice extract on ovarian morphology, oocyte maturation, and embryo development in PCOS-induced mice: An experimental study[2010 october 13] Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7569710/>[Accessed 4th July 2024]

12) Al-Qarawi A. A., Abdel-Rahman H. A., El-Badry A. A., Harraz F., Razig N. A., Abdel-Magied E. M. The effect of extracts of *Cynomorium coccineum* and *Withania somnifera* on gonadotrophins and ovarian follicles of immature wistar rats. *Phytotherapy Research*. 2000;14(4):288–290. doi: 10.1002/1099-1573(200006)14:4<288::AID-PTR603>3.0.CO;2-9. doi: 10.1002/1099-1573(200006)14:4<288::AID-PTR603>3.0.CO;2-9.

13) *Kashyapa Samhita or Vriddha Jivakiya Tantra*, PV Tewari, Chaukhambha Visvabharati, Varanasi, reprint, 2013: 349.

Table No. 1 Timeline

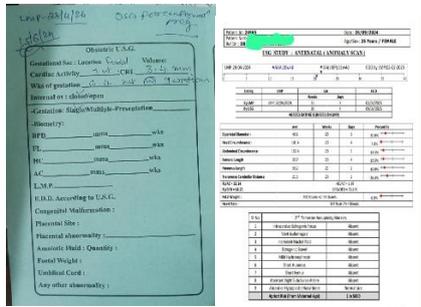
Date	Procedure	Drug	Dose	Route	Duration
16/01/2024	<i>Virechana Karma</i>	<i>Trivrutta Avaleha</i>	60 gm	Oral	1 day
02/04/2024	<i>Matra Basti</i>	<i>Dashmula Taila</i>	60 ml	Rectal	For 7 days
From 13/04/2024 onwards	-	<i>Ashwagandha Churna</i> <i>Shatapushpa Churna</i> <i>Yashtimadhu Churna</i>	2 gm 2 gm 1 gm } bd	Oral	After cessation of menses
06/05/2024	<i>Madhutailik Basti</i>	<i>Makshika, Saindhava, Tila taila, Kalka-Shatapushpa Churna, Madanphala Churna, Kwatha-Erandamula Kwatha</i>	As per table no. 3	Rectal	For 8 days

Table no. 2(Virechana Karma)

No.	Procedure	Drug	Duration
1	Deepana-Pachana	Trikatu Choorna 1gm / 3 times with warm water	5 days
2	Snehapana	Goghrita	5 days
3	Sarvanga Abhyanga Swedana	Abhyanga with Bala Taila and Bashpa Swedana	4 days
4	Virechana on 16/01/2024 (vega – 24)	Trivrutta Avaleha-70 gm	1 day
5	Sansarjana krama	Diet	7 days

Table no. 3 (Madhutailika Basti)

1	Makshika	60 gm
2	Saindhava	6 gm
3	Sneha- Tila Taila	60 ml
4	Kalka-Madanphala Churna Shatapushpa Churna	10 gm 15 gm
5	Kwatha-Erandamoola Kwatha	250 ml



1. USG dated 15/06/2024 Showing 6.4 weeks normal G. sac
2. Anomaly scan

